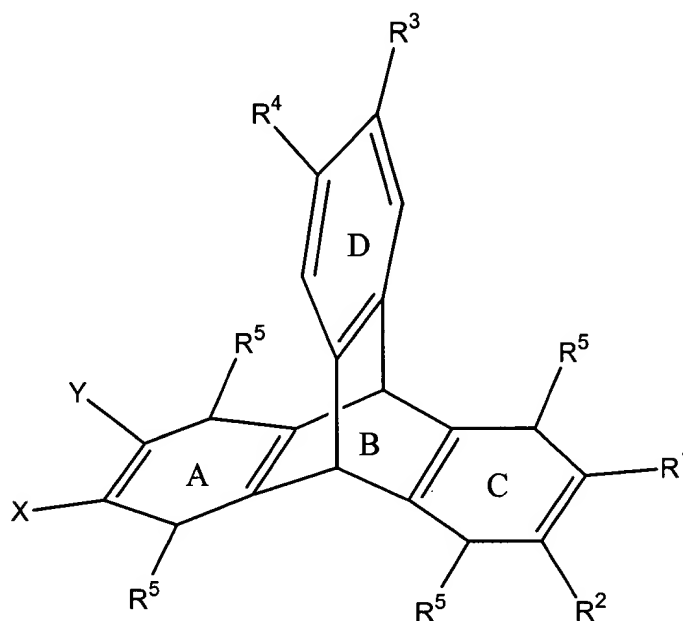


Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously presented) A triptycene analog comprising a compound of formula:



wherein

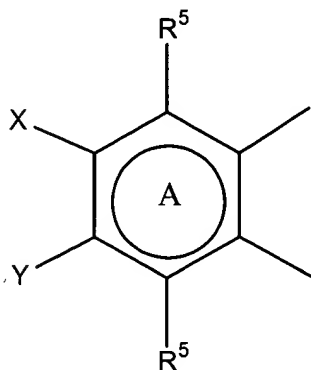
X is selected from the group consisting of: H, R, SR and NR₂;

Y is selected from the group consisting of: halogen, R, NR₂, SR and H;

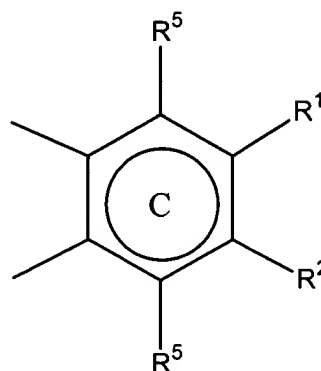
R and R¹⁻² are independently selected from the group consisting of: H, halogen, OR, and hydrocarbyl;

R³⁻⁴, independently of one another, are selected from the group consisting of: H, bromine, R, SR, and NR₂;

R^5 , independently of other R^5 s, is selected from the group consisting of: $=O$, $=N-OH$ and $=CHR$; and reduced forms thereof, wherein in reduced forms, either ring A or ring C or both is replaced with

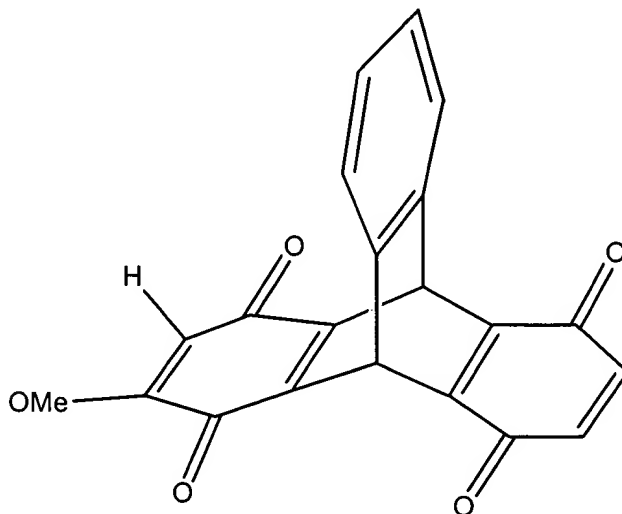


or

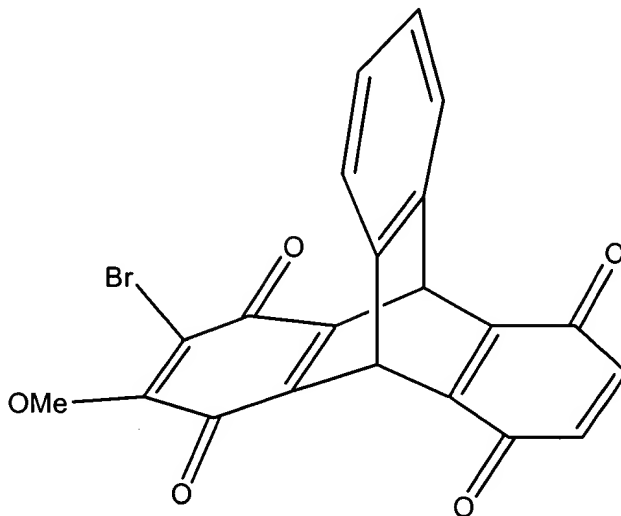


and wherein in reduced forms, each R^5 is independently H, C1-C8 alkyl or $-OR$; and pharmaceutically acceptable salts of the foregoing, as well as optical isomers thereof; wherein when all of R^5 are $=O$, at least one of X, Y, R^1 - R^4 is not H.

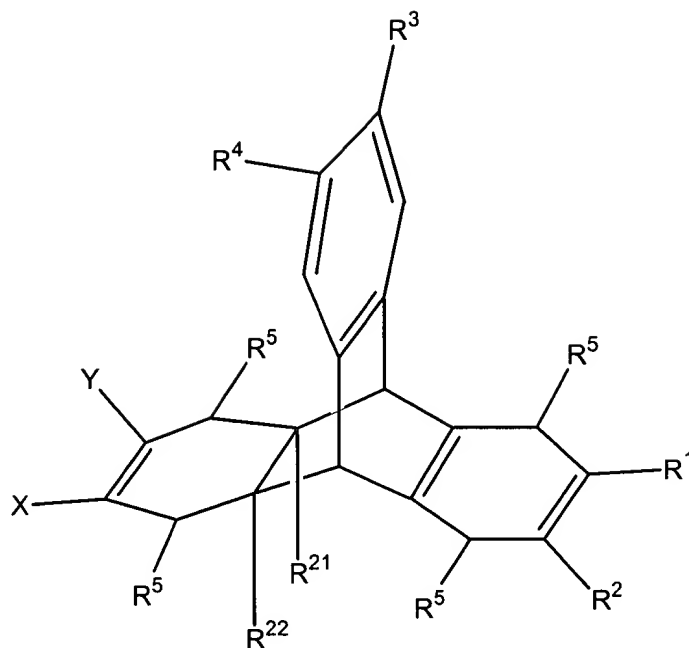
2. (original) The triptycene analog of claim 1 having the formula:



3. (original) The triptycene analog of claim 1 having the formula:



4. (original) The triptycene analog of claim 1, wherein:
X is selected from the group consisting of: H, OMe and CO₂Me;
Y is selected from the group consisting of: H, Br, and OMe;
R¹, R², R³ and R⁴ are all H; and
R⁵ is, independently of other R⁵s, selected from the group consisting of: OH, OMe, =O, and H.
5. (original) A triptycene analog having the formula:



wherein

X is selected from the group consisting of: H, R, SR and NR_2

Y is selected from the group consisting of: halogen, NR_2 , R, SR and H;

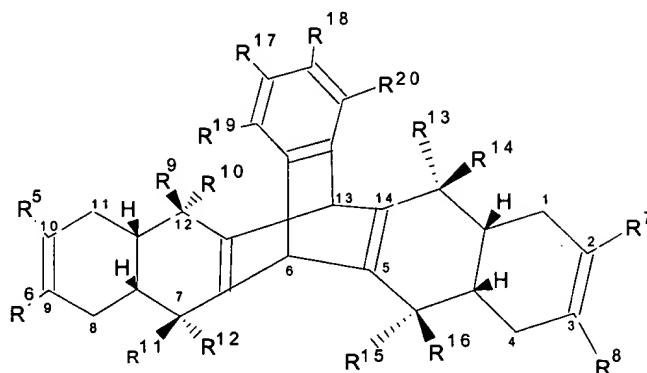
R and R^{1-2} , are independently selected from the group consisting of: H, halogen, OR, and hydrocarbyl;

R^{3-4} , independently of one another, are selected from the group consisting of: H, bromine, R, SR, and NR_2 ;

R^5 , independently of other R^5 's, is selected from the group consisting of: $=\text{O}$, $=\text{N}-\text{OH}$, and $=\text{CHR}$;

R^{21} and R^{22} are independently selected from the group consisting of: H, R, and OR; and reduced forms thereof and pharmaceutically acceptable salts of the foregoing, as well as optical isomers thereof.

6. (original) A triptycene analog having the formula:



wherein

R^5 is selected from the group consisting of: R, halogen, NR_2 , SR, and H;

R^6 is selected from the group consisting of: H, R, SR and NR_2 ;

R^7 and R^8 are independently selected from the group consisting of: H, halogen, and hydrocarbyl;

R^{17} and R^{18} are independently are selected from the group consisting of: H, bromine, R, SR, and NR_2 ;

R^{19} and R^{20} are, independently of one another, H, R, or OR;

(R^9 and R^{10}) and (R^{11} and R^{12}) and (R^{13} and R^{14}) and (R^{15} and R^{16}) are independently together =O or are independently H or -OR;

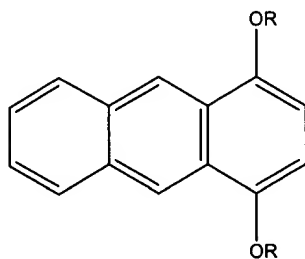
R is selected from the group consisting of: H, halogen, OR, and hydrocarbyl; and reduced forms thereof;

and pharmaceutically acceptable salts of the foregoing, as well as optical isomers thereof.

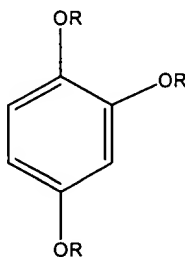
7. (original) A method of making a compound of claim 1, comprising:

heating an optionally substituted anthracene with an optionally substituted quinone with silver oxide.

8. (original) The method of claim 7, further comprising adding zinc iodide.
9. (original) The method of claim 7, wherein the optionally substituted anthracene has the formula:

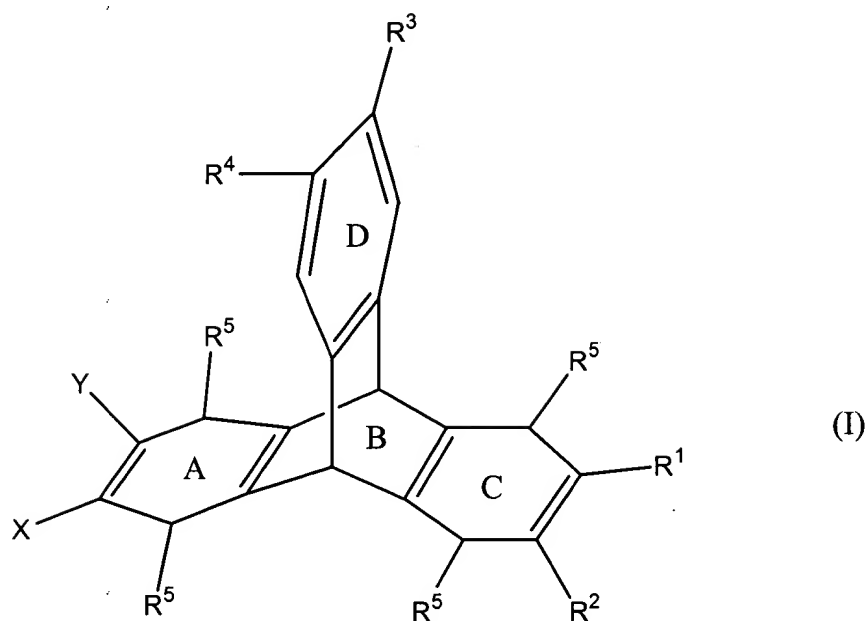


and the optionally substituted quinone has the formula:



where R is H or hydrocarbyl.

10. (Currently amended) A method of brominating ~~a triptycene derivative by reacting a~~ triptycene derivative of formula (I): ~~with N-bromosuccinimide.~~



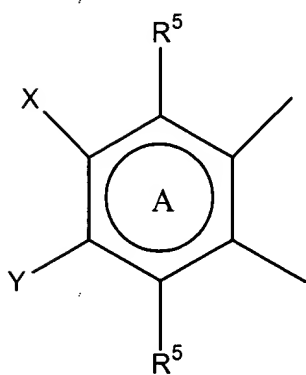
wherein X is selected from the group consisting of: H, R, SR and NR₂;

Y is selected from the group consisting of: halogen, R, NR₂, SR and H;

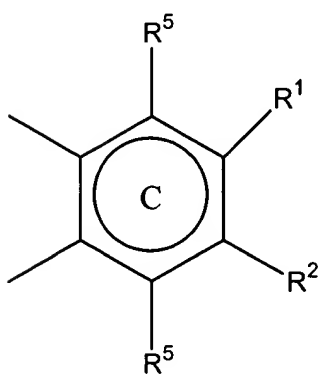
R and R¹⁻² are independently selected from the group consisting of: H, halogen, OR, and hydrocarbyl;

R³⁻⁴, independently of one another, are selected from the group consisting of: H, bromine, R, SR, and NR₂;

R⁵, independently of other R⁵s, is selected from the group consisting of: =O, =N-OH and =CHR; and reduced forms thereof, wherein in reduced forms, either ring A or ring C or both is replaced with

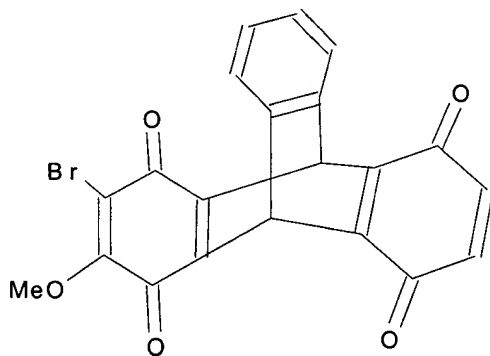


or



and wherein in reduced forms, each R⁵ is independently H, C1-C8 alkyl or -OR;
and pharmaceutically acceptable salts of the foregoing, as well as optical isomers thereof;
wherein when all of R⁵ are =O, at least one of X, Y, R¹-R⁴ is not H; and
wherein either:
(a) Y is a hydrogen and X is a methoxy group;
(b) R¹ is a hydrogen and R² is a methoxy group; or
(c) R² is a hydrogen and R¹ is a methoxy group,
by reacting a triptycene derivative of formula (I) with N-bromosuccinimide, wherein the
Y, R¹ or R² that is hydrogen is replaced with a bromine.

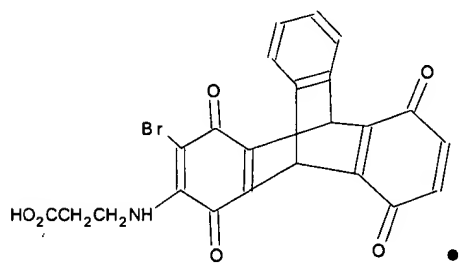
11. (original) The method of claim 10, wherein the triptycene derivative is:



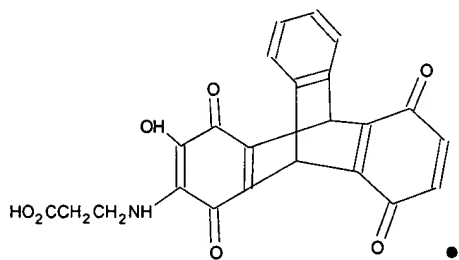
12. (Canceled)

13. (Canceled)
14. (original) A triptycene analog of claim 1,
wherein at least one of X, Y, R¹ and R² is selected from the group consisting of: a
nitrogen containing group, a water soluble group, and a sulfur containing group.
15. (original) The compound of claim 14, wherein X is -NR₂.
16. (original) The compound of claim 14, wherein R² is -NR₂.
17. (original) The compound of claim 16, wherein R² is -NMe₂.
18. (original) The compound of claim 14, wherein at least one of X, Y, R¹ and R² is selected
from the group consisting of: amine, amino acid and amine sugar.
19. (original) The compound of claim 14, wherein X is -NH-(CH₂)_n-CO₂R, where n is an
integer from 0 to 8, and R is as defined in claim 14.
20. (original) The compound of claim 19 wherein R is H.
21. (original) The compound of claim 14, wherein one or more of X, Y, R¹ and R² contains an
optionally substituted nitrogen containing hydrocarbyl group.
22. (original) The compound of claim 21, wherein the optionally substituted nitrogen
containing hydrocarbyl group is a fused ring structure.

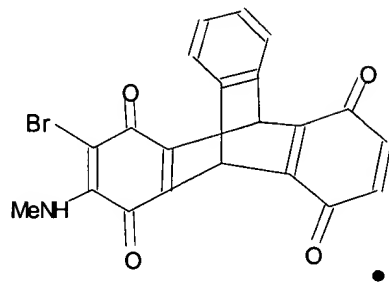
23. (original) The compound of claim 14, wherein X is a sulfur containing group.
24. (original) The compound of claim 23, wherein the sulfur containing group also contains one or more N atoms.
25. (Currently amended) The compound of claim 14 having the formula:



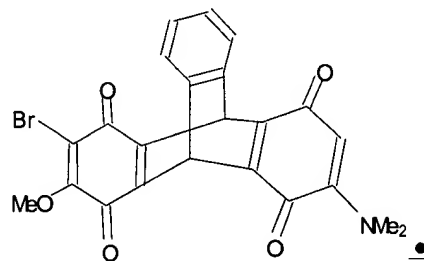
26. (Currently amended) The compound of claim 14 having the formula:



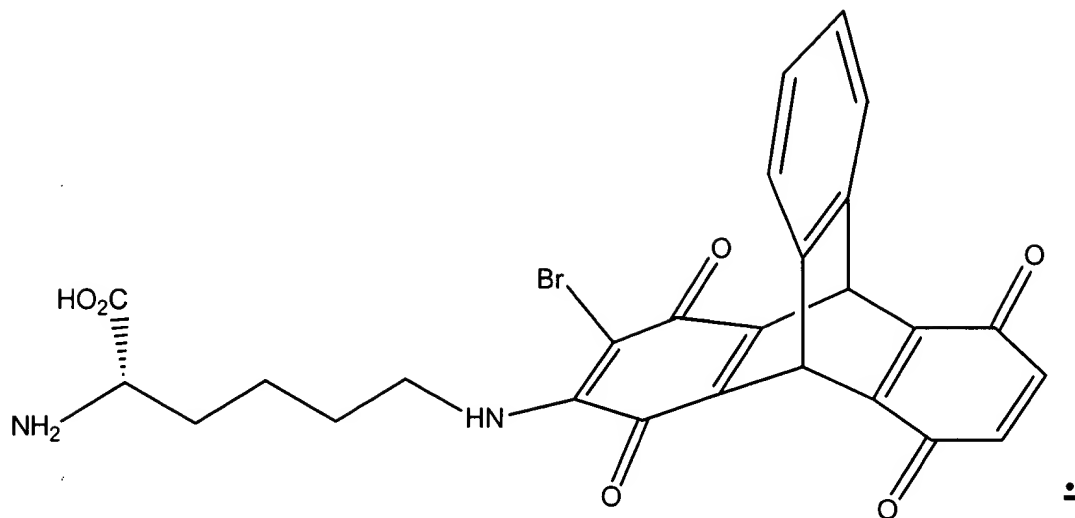
27. (Currently amended) The compound of claim 14 having the formula:



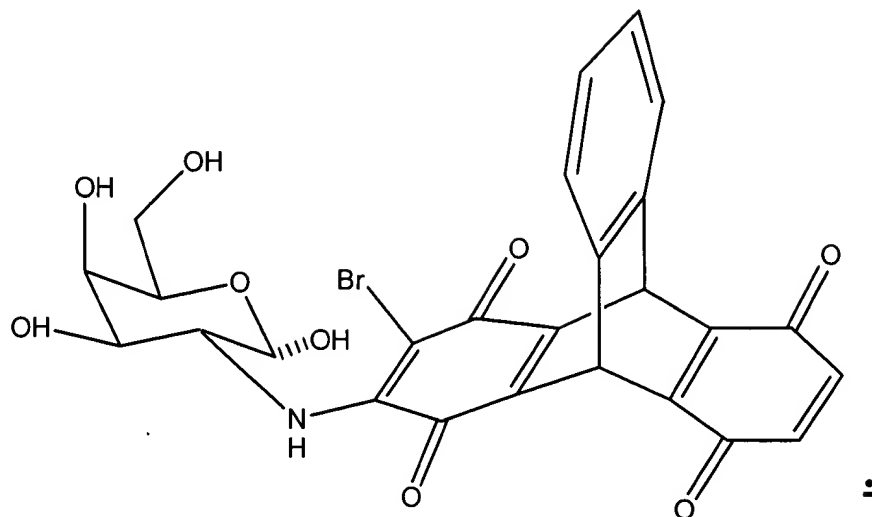
28. (Currently amended) The compound of claim 14 having the formula:



29. (Currently amended) The compound of claim 14 having the formula:

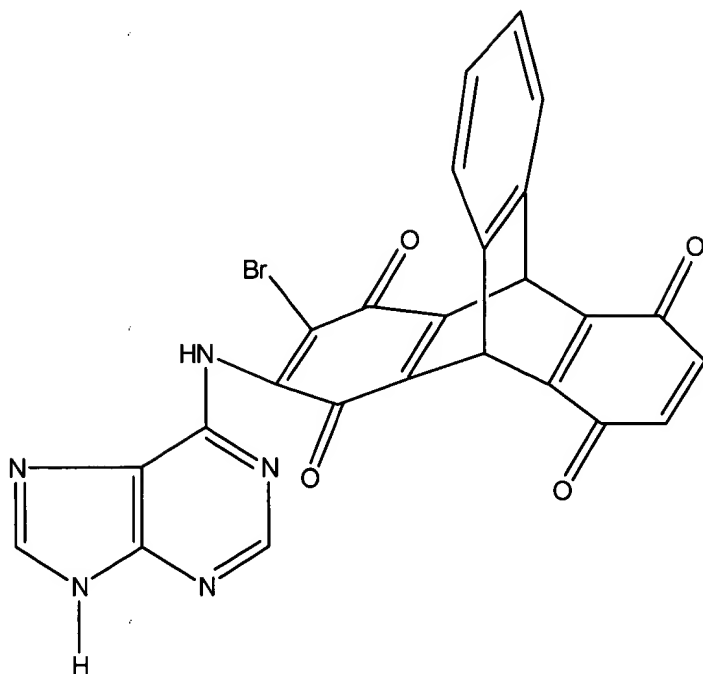


30. (Currently amended) The compound of claim 14 having the formula:



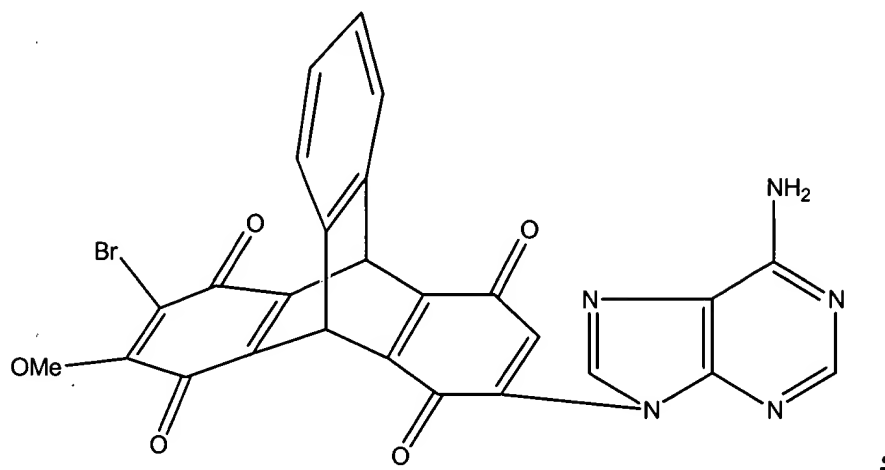
31. (Currently amended) The compound of claim 14 having the formula:

Appl. No. 09/974,716
Amdt. Dated June 8, 2004
Reply to Office Action of April 7, 2004

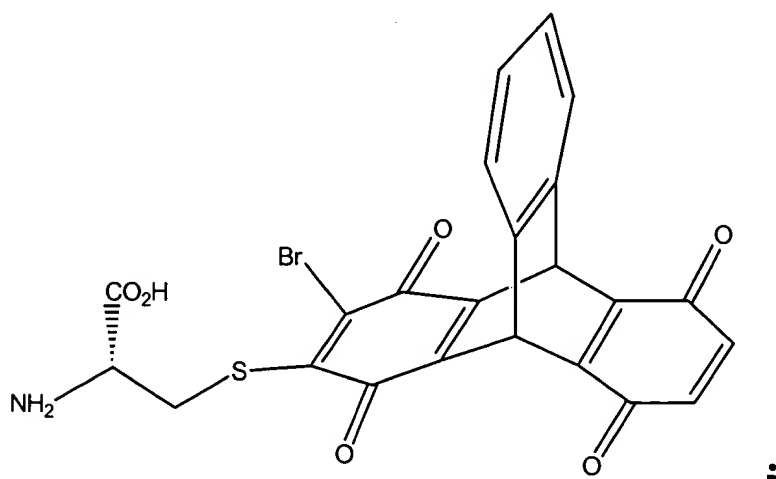


1

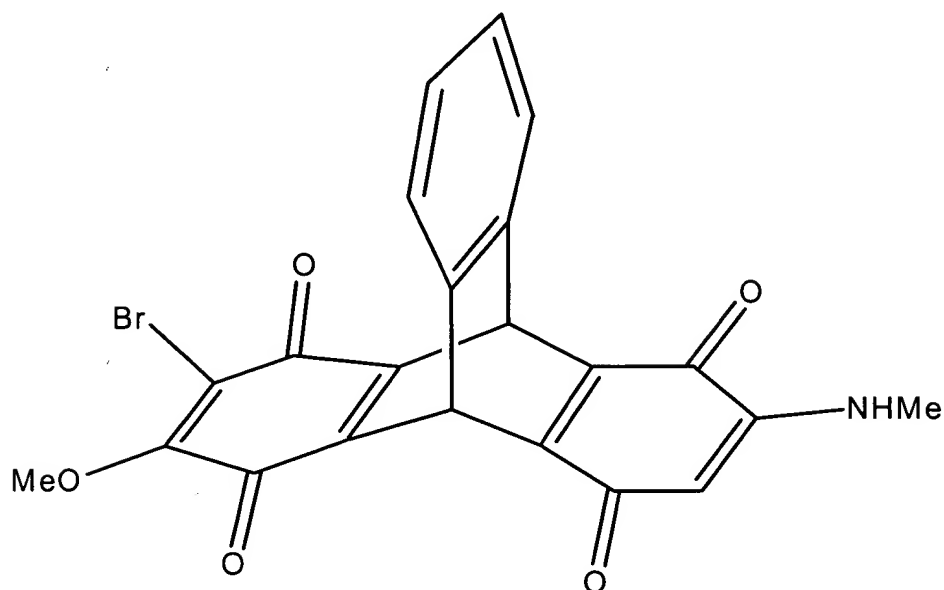
32. (Currently amended) The compound of claim 14 having the formula:



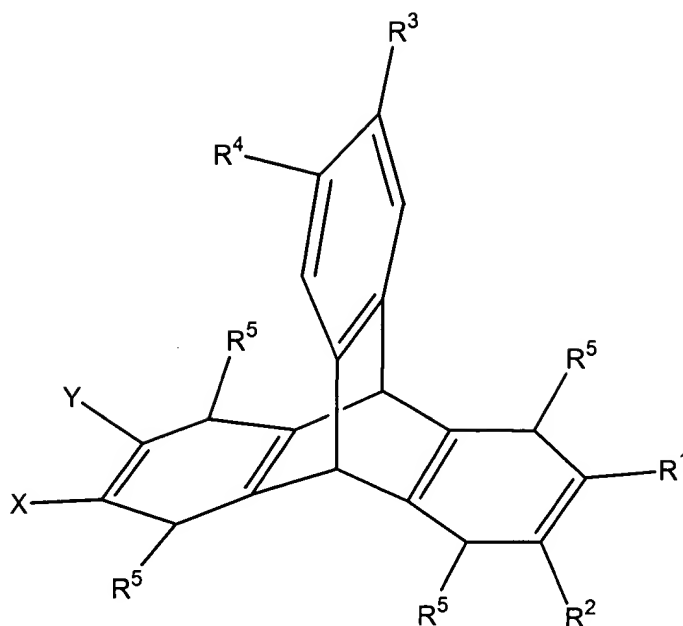
33. (Currently amended) The compound of claim 14 having the formula:



34. (Currently amended) The triptycene analog of claim 14 having the formula:



35. (original) A triptycene analog comprising a compound of formula:



wherein X is $-NW(CW_2)_nZ$, where the Ws are independently selected from the group consisting of: H, C1-C8 alkyl, and C1-C8 alkenyl; n is an integer from 1 to 8; and Z is selected from the group consisting of: R, COR, COOR, $CONR_2$, OOCR and NRCOR; Y is selected from the group consisting of: halogen, C1-C8 alkyl, C1-C8 alkenyl, OR, NR_2 , SR, H, COR, OCOR and NRCOR;

R and R^{1-2} , are independently selected from the group consisting of: H, OR, and hydrocarbyl;

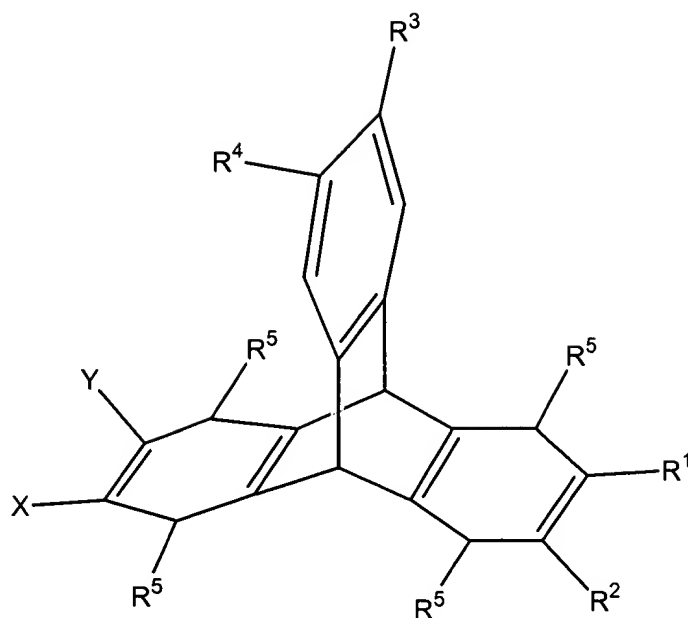
R^{3-4} , independently of one another, are selected from the group consisting of: H, OR, SR, and NR_2 ;

R^5 , is =O; and reduced forms thereof and pharmaceutically acceptable salts of the foregoing, as well as optical isomers thereof.

36. (original) The triptycene analog of claim 5,

wherein at least one of X, Y, R¹ and R² is selected from the group consisting of: a nitrogen containing group, a water soluble group, and a sulfur containing group.

37. (Previously presented) The compound of claim 36 wherein at least one of R²¹ and R²² is - CO₂R.
38. (original) The compound of claim 14 which blocks nucleoside transport, induces DNA fragmentation, inhibits nucleic acid synthesis, inhibits protein synthesis, decreases the proliferation of cancer cells, or decreases the viability of cancer cells.
39. (original) The triptycene analog of claim 6,
wherein at least one of R⁵, R⁶, R⁷ and R⁸ is selected from the group consisting of: a nitrogen containing group, a water soluble group, and a sulfur containing group.
40. (original) A method of making a nitrogen-containing compound of claim 14, comprising:
reacting a triptycene derivative of formula:



wherein

R^{3-4} , independently of one another, are selected from the group consisting of: H, bromine, R, SR and NR_2 ;

R^5 , independently of other R^5 s, is selected from the group consisting of: =O, and =N-OH, and =CHR;

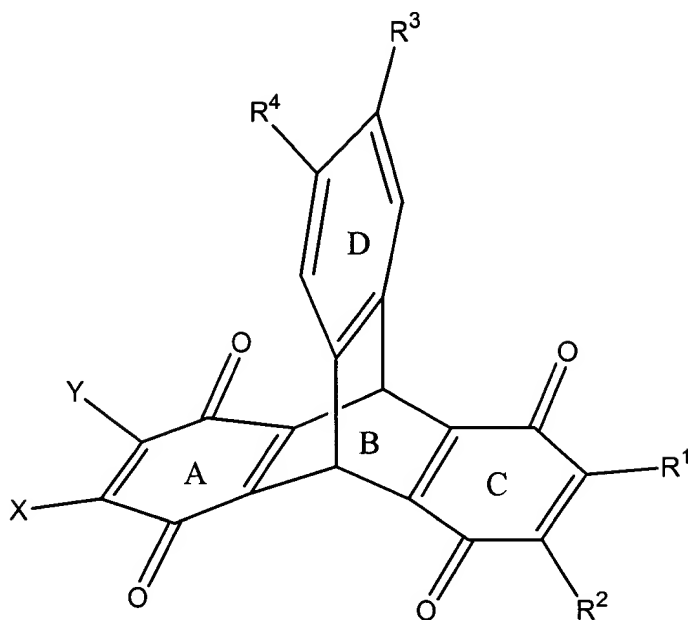
Y is Br, and X is -OR;

R and R^{1-2} are independently selected from the group consisting of: H, OR, and hydrocarbyl; and reduced forms thereof; with a primary or secondary amine.

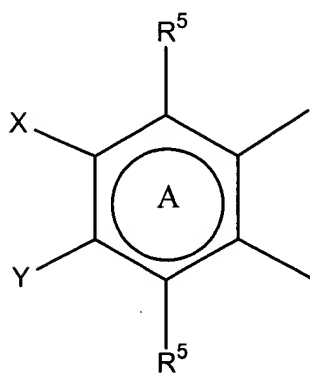
41. (Canceled)

42. (Canceled)

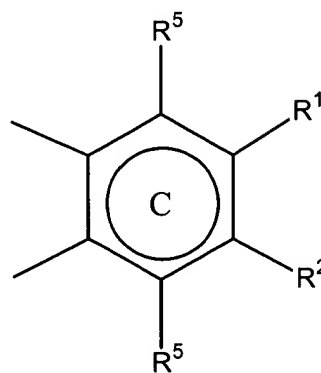
43. (Previously presented) A triptycene analog of formula:



and the reduced forms thereof, wherein in said reduced forms, either ring A or ring C or both is reduced to



or



wherein all but one of X, Y, R1 and R2 is independently H, C1-C6 alkyl, C1-C6 alkenyl, OR, SR or NR2 wherein each R is independently H or C1-C6 alkyl and the other R1 or R2 is a solubilizing group; and each R5 is independently H, C1-C6 alkyl or OR.

44. (original) The triptycene analog of claim 43, wherein the solubilizing group is of the formula:

$\text{NR}(\text{CR}_2)_n\text{X}$ wherein X is a sugar, R, COR, COOR, CONR_2 , OOCR and NRCOR; R is independently selected from the group consisting of: H, C1-C8 alkyl and C1-C8 alkenyl; n is an integer from 1 to 8.